Resource Stewardship

Resource Stewardship Evaluation Tool (RSET)

Crop Evaluations

Contents

Updated October 2018

Resource Stewardship Overview

Resource Stewardship (RS) is a voluntary service provided by NRCS through a new evaluation tool. RS enhances conservation planning by benchmarking the level of resource stewardship on the land and helping NRCS clients better identify their conservation goals and improve their outcomes.

RS (also known as the Resource Stewardship Evaluation Tool or RSET) uses a web-based platform to evaluate the health of soil, water, air, and wildlife habitat. RS evaluates a user defined management system against the inherent site characteristics to perform this evaluation.

Upon the completion of RS, clients receive a report called the Resource Stewardship Evaluation (RSE) which visually graphs their stewardship achievements and suggests opportunities to improve resource stewardship. Evaluations are available for crop, pasture, range, forest, farmstead, and associated ag land uses.

If you would like a Resource Stewardship Evaluation completed on your operation, please reach out to your local NRCS office (https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/local/).
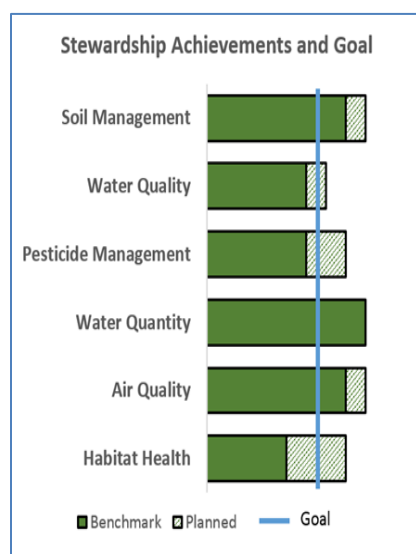
Left: Example visual from an RSE report, highlighting where a client's operation scores on each of the criteria listed in comparison to the vertical blue threshold bar. The shaded bars suggest opportunities the client can take to meet or surpass the threshold bar and improve resource stewardship.

Please note that in order to maintain and protect confidential client information, only NRCS staff and specific partners can currently access RS. To access Resource Stewardship, visit https://rs.sc.egov.usda.gov/Splash.aspx/.

The following instructional walk-throughs are developed for those with access to RS to use as a resource while completing evaluations, as well as for those interested in learning more about RS.

Client Search Overview

Selecting a client and Planned Land Unit (PLU) is the first step in Resource Stewardship (RS). Please note that only NRCS staff and select partners have access to detailed client information within RS.

After logging into Resource Stewardship (https://rs.sc.egov.usda.gov/Splash.aspx), a search bar will be displayed to search for clients and identify a Planned Land Unit (PLU) to evaluate. Access to clients is determined by individual user's role(s) in the Customer Service Toolkit (CST), managed through the zroles system.

It is important to note that a PLU must be identified and created in CST prior to running an evaluation. A PLU is a unique geographic area, defined by a polygon, which has common land use and is owned, operated, or managed by the same cooperator(s). The PLU is the minimum unit for planning and evaluation. RS pulls PLUs from CST. PLUs must be in Plan (green) or in Locked (red) status and will be imported from an existing conservation map plan by searching for the land user's name. PLUs may or may not correspond to the Farm Service Agency (FSA) tracts and fields identified in the Common Land Unit (CLU) layer maintained by FSA depending on how the PLUs were setup in toolkit by the conservation planner. Any number of planned land units may be evaluated individually or together in an operation evaluation. When performing the evaluation, adjacent land which is outside of the PLU but integral to the PLU management system will also be considered when evaluating the PLU. For instance, management of field bordering vegetation and adjacent conservation practices, such as windbreaks, may also provide wildlife benefits, as well as have an effect on soil, water, and air quality.

Client Search Walk-Through

STEP 1: Identify the Client

1. Search the National Planning and Agreements Database (NPAD) for a client by entering the client name in the search string and clicking the **Search Clients** button. The returned client results can be narrowed down to clients in state and county or the initial client search can

specifically search for clients by state and county. Uncheck the **Exact Word Match** box for clients with an ampersand (&) in their name.

If numerous clients are returned, the client list can be sorted numerically or alphabetically by clicking on the column header.

2. Select the client by clicking on the client's name.

Existing PLUs (if any) and operation evaluations will be displayed.

Status	Result Type	Name				Land Unit	Land Use	Acres	Benchmark	Date	Id
☑	Standard	Benchmark	✎	↻	🗑	11769/ 6	Crop	5.01	YES	08/22/2017	6896
☑	Standard	Alt Scenario 2	✎	↻	🗑	11769/ 2	Crop	1.37	NO	10/17/2017	6897
⊟	Standard	Alt Scenario - new PLU	✎	↻	🗑	11769/ 5	Crop	11.2	NO	11/13/2017	6898
☑	Standard	Alt Scenario	✎	↻	🗑	11769/ 6	Crop	5.01	NO	12/29/2017	6899

Evaluations for ROSE LAKE PLANT MATERIAL CENTER

⏮ ◀◀ Page 1 of 1 ▶▶ ▶⏭   Found: 4

Step 2: Identify the Planned Land Unit

1. Click on the **View Client Land Units** button 🔍 to view the client's land units.

   The land units can be sorted numerically or alphabetically by clicking the up or down arrow located on the column header.

2. If several land units are associated with this client, determine which one to select. Click on a land unit in the display area to view the attributes. To dismiss the popup, click the x located in the upper right corner or click in the map area off of the land unit.

   Navigating the Display Area

Zoom In	Click the Zoom In ⊞ button or roll the mouse scroll wheel away from you.
Zoom Out	Click the Zoom Out ⊟ button or roll the mouse scroll wheel towards from
Pan	Hold down the left mouse button or scroll wheel and move the mouse.

3. Click the **View or Add Evaluations** button associated with the selected land unit.

An Evaluations tab is added.

Creating a New Evaluation Overview

RS allows users to create two different types of evaluations: a benchmark and an alternate scenario. A benchmark designation is meant to act as a starting point for conservation planning. RS envisions the opportunities for evaluating multiple alternative scenarios as part of the planning process, as well as documenting implementation and effects as conservation practices and activities are applied.

Alternate scenarios may be related to specific conservation plans, programs or evaluation dates documenting continuous improvement. The user should select a name for the evaluation which appropriately indicates its relationship.

Creating a New Evaluation Walk-Through

Once a client and planned land unit (PLU) have been selected, the Evaluations tab will be added on the Client bar in the Search tab.

1. Click the **Add New Evaluation** button.

2. The Add New Evaluation dialog opens. In the Add New Evaluation dialog, enter the **evaluation name**, **date,** and answer **Yes** if this is the benchmark evaluation. The benchmark represents the current condition. There can only be one benchmark per PLU but there can be many alternate scenario evaluations. The date for the evaluation defaults to the date it was create in RS. The user may modify this date to reflect when the field evaluation was conducted.

3. Click the **Submit** button when done.

The evaluation is added to the evaluation list.

Creating a New Evaluation for Mutable Land Uses

For land uses categorized in NPAD as protected, undetermined, or other rural land, RS will offer the user the option to select a directly supported land use. In the example below, an evaluation on a protected land use PLU is selected for a client.

1. After selecting the client and a PLU on a mutable land use (protected, undetermined, or other rural land), from the Evaluations tab, select the **Add New Evaluation** ⊕ button.
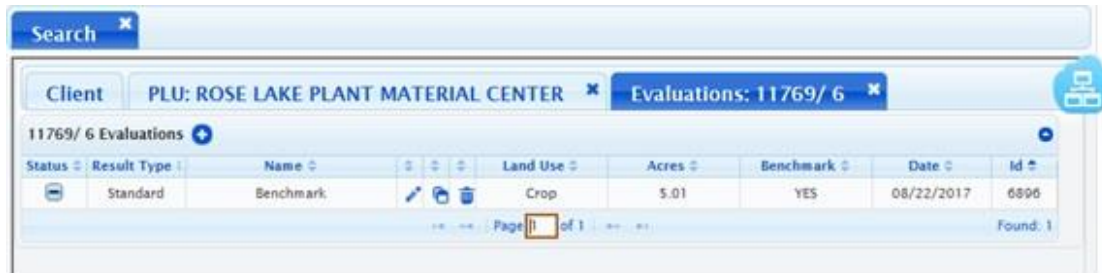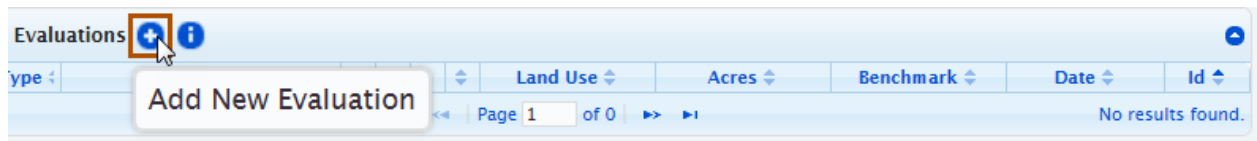

2. The Add New Evaluation dialogue opens. Enter the **evaluation name**, **date,** and answer **Yes** if this is the benchmark evaluation. Because this is an evaluation on a mutable land use (protected, undetermined, or other rural land), select the directly supported **land use** type (associated ag land, crop, farmstead, forest, pasture, or range).

3. Click **submit** when done.

The evaluation is added to the evaluation list. Because the directly supported land use selected was "pasture", note that the land use is displayed as "pasture (protected)".

All evaluations on a given PLU must be of the same land use type.

Creating a New Evaluation Using a JSON Import

1. When creating new crop evaluations, select the **Data Source** for the evaluation on the Add New Evaluation dialogue. The options are manual data entry (default), or JSON imports from disk or from the NRCS Document Management System (DMS).

Add New Evaluation

Name: Benchmark
Date: 08/06/2018
Benchmark: YES ▾

Data Source: Manual Data Entry
Import from disk (JSON)   Required
Import from DMS (JSON)

Submit   Cancel

2. Click **Submit** when done.

Note: Clients must deliver JSON files to the user for the user to load them into RS. The user may load all client files into DMS and import from there, or they may have a JSON import file on disk.

Below are examples of the on-screen results after a JSON import. Users can review import results before deciding whether or not to proceed.

3. After importing data from disk or DMS, select **Save Results to Disk** to save a local copy or select **Discard Evaluation** to delete this evaluation. To proceed, select **Confirm Evaluation Creation**.

Evaluation Import Results

Import Status: Import Successful
Import successful. Evaluation Id: 24510

Save
Results
To Disk

Confirm
Evaluation
Creation

Discard
Evaluation

4. Click on the desired evaluation import listed under the Existing Evaluation Imports bar and select **Save to DMS**. Note that evaluations created via import must store a reference to a DMS import file. Therefore, DMS storage is required. Import files will be annotated with a results section and can be versioned (i.e. 1.0, 2.0, 3.0) in DMS.

Save to DMS ✖

Saving to DMS will create a new document unless you select an existing document to version.

File Name: import 2

Existing Evaluation Imports			⬤
File Name ⇕		Version ⇕	Last Updated ⇕
import 2		2.0	08/06/2018
Clear Selection	⏮ ◀◀ Page 1 of 1 ▶▶ ⏭		Found: 1

The import results must be saved to DMS.

Save to DMS   **Cancel**

Attention ✖

Evaluation 'Benchmark' successfully created.

Close

Note that sometimes an import might be successful but will be undesirable because of the number of errors. Therefore, it may be more efficient to discard the evaluation immediately. To do so, select **Discard Evaluation.**

Evaluation Import Results

Import Status: Import Successful

Crop Rotation ('CROP_4'): Too many decimal places in answer. Expected no more than 2 decimal pl.
Crop Nitrogen ('CROP_1'): Ignored because 'CROP_1' wasn't found in the crop rotation.
Crop Nitrogen ('CROP_4'): Expected because the rotation crop yield for 'CROP_4' is > 0.
Crop Nitrogen ('CROP_1'): Ignored because 'CROP_1' wasn't found in the the crop rotation.
Crop Phosphorus ('CROP_4'): Expected because the rotation crop yield for 'CROP_4' is > 0.
Integrated Pest Management ('CROP_1'): Ignored because 'CROP_1' wasn't found in the crop rotatio
Integrated Pest Management ('CROP_4'): Expected because the rotation crop yield for 'CROP_4' is >
The conservation practice crop id 'CROP_1' does not exsist in the crop rotation list.

| Save Results To Disk | Confirm Evaluation Creation | Discard Evaluation |

Confirm Delete

Are you sure you want to discard the evaluation created from your import?

| Yes Discard | Cancel |

It is also important to note that the import may fail. The user may optionally **save results to disk** before discarding the evaluation. The import file can still be annotated with a result log to save and communicate any problems back to the client.

Evaluation Import Results

Import Status: Import Failed (no evaluation was created)

Import file format version '2420' is invalid. Expected '2444'.

| Save Results To Disk | Close |

5. An evaluation created by JSON import will be noted in RS via a hot-dot on the property grid. Users can click on the **hot-dot** in order to access the import file and result log used to create the evaluation.

Status ⇕	Result Type ⇕	Name ⇕	⇕	⇕	⇕	⇕	Land Use ⇕	Acres ⇕	Benchmark ⇕	Date ⇕
☑	Standard	Benchmark	✏	📋	🗑	●	Crop	16.4	YES	08/06/2018

Created By Import

Download Imported File

Do you want to download the document that was imported to create this evaluation?
Title: import 2
File: import 2.json
Document:

| Download | Cancel |
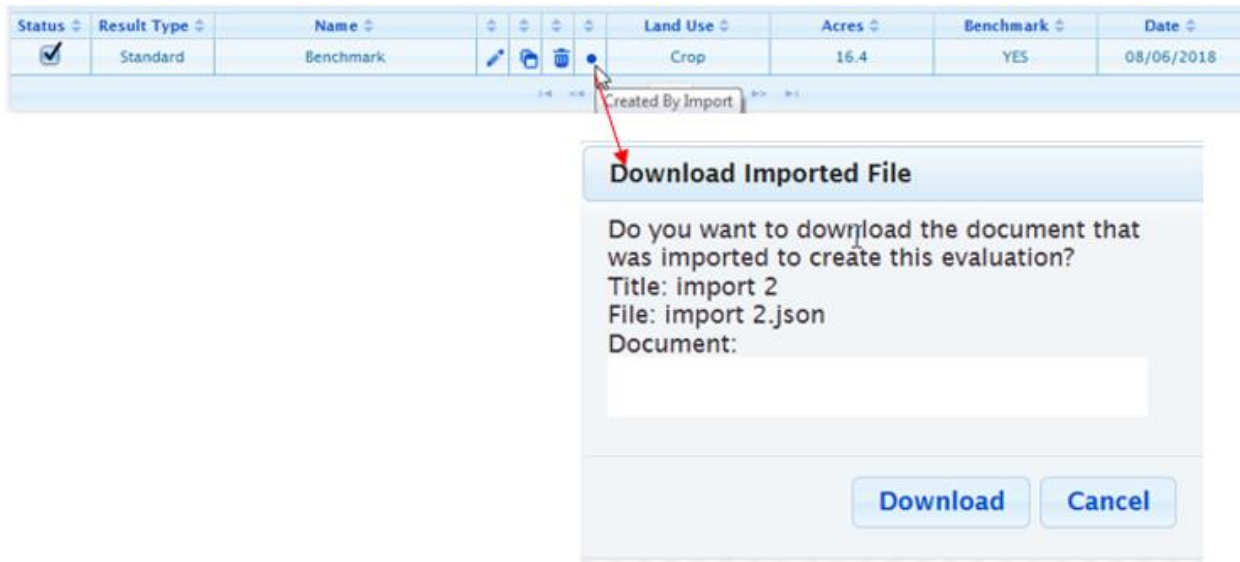
Evaluations Bar Overview

Once an evaluation has been created, it will appear in the Evaluations bar list under the Search tab. The Evaluations bar is where the user can select previous evaluations that have been started or completed for the client. The Evaluations bar displays the result type, the name, the land unit, the land use, acres, benchmark, date and Id. The Evaluations bar also allows the user to edit, copy, or delete evaluations.

Result type: Displays standard or alternative evaluations based on whether the user selected final result type (alternative evaluations utilize input from stand alone tools).

Name: User defined

Land Unit: Customer Service Toolkit (CST) PLU identifying number, typically the FSA tract/field number

Acres: Size of PLU

Benchmark: Yes/No flag identifying benchmark status

Date: Date evaluation performed (default date is the date evaluation was created but this may be modified by user to reflect the date the evaluation was performed in the field)

Id: RS identifying number for PLU

Evaluations Bar Walk-Through

Click on the desired evaluation to activate it.

Evaluations can be edited, copied and pasted to another PLU, or can be deleted. Select the appropriate button to edit, copy, or delete an evaluation.

✏️ Edit Evaluation: Feature allows user to edit name and date of evaluation

📋 Copy Evaluation: Feature allows user to copy an evaluation to run alternate scenarios on the existing PLU or transfer the management system defined in this evaluation to a new PLU

🗑️ Delete Evaluation: Permanently deletes evaluation

Copy Evaluation Feature Overview

The copy evaluation feature is available to copy an evaluation in order to evaluate and compare an alternative scenario or take the current management system that was evaluated and apply it to a different PLU. This feature allows copying to either the current client's PLU or any other PLU as identified by the user.

Any number of alternative evaluations or alternative scenarios may be attached to a PLU. Comparisons may be made against the benchmark evaluation or other alternative evaluations. In the evaluation results section, the user may directly compare two different evaluations on the same report.

Copy an Evaluation to the Current PLU

1. Copy an evaluation by clicking the **Copy Evaluation** button.

2. This opens an evaluation dialogue. To create an alternative scenario on the existing plan unit, enter the **Name** of the evaluation and edit the **Date** or **Benchmark** as appropriate. Click **Submit** when finished.

The tool defaults to copying an evaluation on the existing PLU.

3. Click on the evaluation to activate it.

Copy an Evaluation to a Different PLU (Current Client or Different Clients)

1. Copy an evaluation by clicking the **Copy Evaluation** button.

2. This opens an evaluation dialogue. Enter the **Name** of the evaluation and edit the **Date** or **Benchmark** as appropriate. To create an alternative scenario on a different PLU, select No for **Copy Evaluation to Same Land Unit**.

3. The evaluation dialogue box will display new land units under the existing client and the search feature to look for another client. Select either the different PLU or search for a new client and select the target PLU for that client. Click **Submit** when finished.

4. Click on the evaluation to activate it.

Crop Inventory Overview

After identifying the client and planned land unit (PLU), the next step is to complete the Crop Inventory information. The inventory information entered will use various assessment methodologies to provide an evaluation of the key environmental indicators. These key indicators are based the Resource Concerns within the NRCS Conservation Planning process.

Crop Inventory Walk-Through

1. From the Search bar, select the desired evaluation for the client.

2. Click on the **Inventory** tab or select the Inventory box on the **Roadmap** .

3. Enter the requested PLU Inventory information and click **Save** when finished.

   Note: If the value field is red it is required.

Desired Stewardship Level: National Resource Stewardship

What is the maximum irrigation per years: Amount in inches

Is the field artificially drained: Yes/No

Has gully erosion been controlled to the Field Office Technical Guide specification: Yes/No

Resultant Factor and Threshold values are displayed.

Factor values determined:

Soil Leaching Potential
Soil Runoff Potential
Erodibility Potential – Wind
Erodibility Potential – Water
R Factor

Threshold values determined:

Water Erosion
Wind Erosion
Soil Carbon
Sediment in Surface Water
Total Phosphorus Loss
Surface Nitrogen Loss
Subsurface Nitrogen Loss
Nitrogen Loss to Air
Pesticide Management (Leaching)
Pesticide Management (Solution Runoff)
Pesticide Management (Adsorbed Runoff)
Pesticide Management (Drift)

The Aquatic Habitat, Terrestrial Habitat, Crop Rotation, Irrigation Management, WINPST and Conservation Practices tabs are added.

Navigate through the assessment by clicking on the appropriate tab or by clicking on the **Roadmap** and choosing the appropriate assessment.
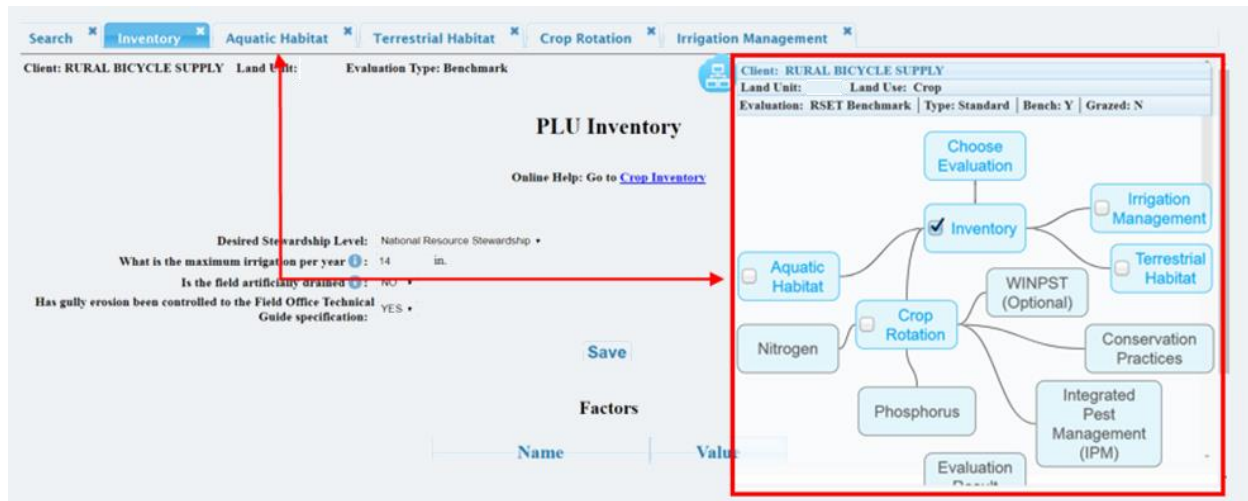
Crop Rotation Overview

The Crop Rotation is the central building block to evaluate the Conservation System and it affects all the key indicators. The rotation building section in Resource Stewardship attempts to gain basic information about the rotation and evaluate the management points that the rotation contributes to the overall system. Besides the basic crop rotation questions, more refinement of the rotation is determined by the nutrient and pesticide information entered, as well as through the Conservation Practices and Management Techniques. This section will look at building rotations within Resource Stewardship.
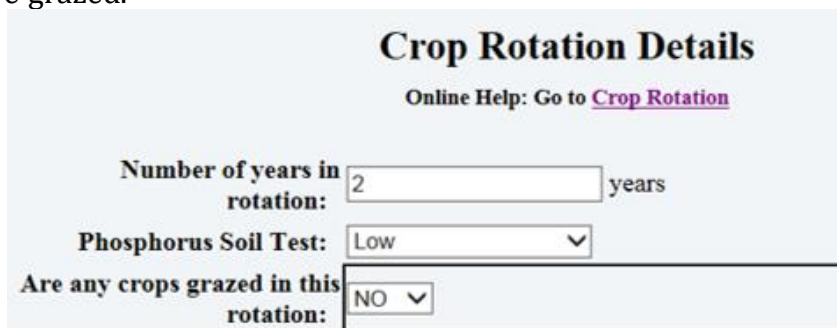
Rotation Level Information

The tool starts the rotation building by looking a few basic questions:

- Years in Rotation
- Phosphorus Soil Test (Y/N)
- Information for each crop:
    - Crop Name
    - Crop Yield
    - Tillage Type
    - Cover type following the crop

Crop Rotation Walk-Through

1. Click on the **Crop Rotation** tab or select it in the **Roadmap** .

2. Enter the crop rotation details. In this example, there are 2 years in this rotation and no crops are grazed.

Crop Rotation Details

Online Help: Go to Crop Rotation

Number of years in rotation:	2 years
Phosphorus Soil Test:	Low
Are any crops grazed in this rotation:	NO

Number of years in rotation: Number from 1 to 10

Note: This establishes the number of calendar years for the rotation before the rotation

repeats. This number is primarily derived from client information for what period of time to evaluate. Farmer records and/or Farm Service Records may be helpful when establishing a rotation period and various crops utilized.

Phosphorus Soil Test: Select answer from drop-down (No Test, Low, Medium, High (Optimum), Excessive/Very High)

Note: Because Soil Phosphorus Tests under normal conditions are unlikely to change in the period covered by a typical rotation, this data is collected at the rotation level. Soil Phosphorus Tests are utilized when evaluating the Nutrient Management Risk of off-site Phosphorus loss and are particularly used when evaluating the management effect of the Phosphorus Rate. Please refer to NRCS state guidance on soil test results.

Are any crops grazed in this rotation: Yes/No. If Yes, answer the following:

Is livestock access to sensitive areas, such as steep slopes, nearby water bodies and riparian areas, managed in order to prevent degradation: Yes/No

Are livestock excluded from the cropland during freeze/thaw periods or when soils are saturated in order to prevent degradation: Yes/No

Crop Rotation Interval Tabs

After establishing the period of rotation, the user is then asked to create a tab for each crop interval used in the rotation. The minimum number of tabs to create would be one for each growing season or year or one for each different crop in the rotation.

For each crop tab, basic information about the crop management is captured.
- Crop Yield
- Tillage Type
- Cover Type following this crop

For perennial crops, like alfalfa, make an entry in the Crop Rotation section for each year it is in the field. (Users may enter one full year, including any nutrient and pest management information, and then copy that entry for the succeeding years.) Non-harvested cover crops are accounted with the crop they follow.

The below walk-though example shows the following cropping system:

	Crop	Crop	Tillage	Cover Type
Interval 1	Field Grain Corn bu/ac	202	No-Till (Spring or Fall)	Fallow – No Cover Crop
Interval 2	Soybeans bu/ac	73	No-Till (Spring or Fall)	Fallow – No Cover Crop

3. Enter the crop details for Crop Interval 1. In this example, the crop name is **Field Grain Corn bu/ac.** The crop yield is **202** and the tillage type is **No-Till**. The Cover type following this crop is **No Cover Crop**. Click **Save**.

Crop Name (if fallow, type of fallow): Select answer from drop-down

Note: Fallow is not considered a crop in standard conservation planning but is essential to capture in the Resource Stewardship tool. Crop rotations with a fallow period should include a tab and select Fallow for the Crop Name.

Crop Yield: Crop Yield information should be based on fertilization recommendations and reasonable yield targets. Confirm that yield is given in the same units as the crop.

Note: Hold the cursor over the information icon to get more information.

A zero value for Crop Yield means you will not be asked to fill out information about Nitrogen, Phosphorus, Integrated Pest Management, Conservation Practices, or Winter Cover.

Tillage Type: Select answer from drop-down (see choices in the table below)

Tillage Type affects the amount of residue on the site significantly. The choices list was

24

designed to simplify tillage types to match up with the residue management conservation practices. Because of this simplification, the choices are fairly conservative in their beneficial effects (to the lowest value of each category). The Resource Stewardship Tillage Multiplier affects the residue value for the crop, which is then assigned management points for residue effect across each key indicator. An important point to keep in mind when determining the RS Tillage Type is that this is the tillage use for preparation for that specific crop, not the entire rotation. For Example: It is possible to No-Till soybeans but Reduce Till corn. Each of those crops would enter the appropriate Tillage Type used, even though the rotation may not meet the standard for 329, Residue and Tillage Management, No Till Conservation Practice Standard. If the site does meet the standard for this practice, additional credit for that would be identified in the Conservation Practice and Management Techniques section.

On tillage types No-Till and No Tillage: No-Till addresses how a crop is planted. No Tillage would be used in fallow years.

RS Tillage Type	Typical STIR range	RS Tillage Multiplier
Clean Tillage (> 30 days before planting)	>80	0.05
Clean Tillage (< 30 days before planting)	>80	.1
Reduced Tillage (> 30 days before planting)	<80	0.3
Reduced Tillage (< 30 days before planting)	<80	0.6
No-Till	<20	1
No Tillage	0	1
Perennial Crop	0	1.5

Cover type following this crop: Select answer from drop-down

Note: The Cover type following this crop question is important when creating the entire picture of the rotation. It provides the residue management credit for cover crops, which is primarily focused on the amount of growth time for the cover crop and if it is winter killed or not. As discussed above, additional management credit for meeting the Cover Crop Standard should be addressed through the Conservation Practice and Management Techniques Section.

In a single crop growing season, such as corn, cover type following this crop represents the winter cover after the crop is harvested. In a more complex double or triple crop growing season, this identifies where this crop fits in the rotation.

The following are some examples:

Simple Rotation: In a simple 2 year rotation, such as Corn/Soybean, two tabs would be created. Each of these would have Fallow – No Cover Crop as the Cover type following.

Crop Tabs	Cover Type follow Crop
Corn	No Cover Crop
Soybean	No Cover Crop

Adding Winter Wheat: In the simple 2 year rotation above, if Winter Wheat were added to the 2 year rotation of corn and soybeans then three tabs would be created. Winter Wheat would be shown to be planted after corn and then soybeans would be double cropped after the Winter Wheat. This would keep it at a two year rotation.

Crop Tabs	Cover Type follow Crop
Corn	Annual Crop

Winter Wheat	Annual Crop
Soybeans	No Cover Crop

If Winter Wheat is added as shown below at the end of corn and soybeans, then this would be a 3 year rotation in the tool.

Crop Tabs	Cover Type follow Crop
Corn	No Cover Crop
Soybeans	Annual Crop
Winter Wheat	Annual Crop

Multi-Year Crop: In a 5 year hay rotation, 5 tabs, each with hay, would be created. They will likely be the same, although the establishment year may have different tillage and fertilization. Each of these would have Perennial Crop, as the Cover type following.

Crop Tabs	Cover Type follow Crop
Hay	Perennial Crop
Hay	Perennial Crop
Hay	Perennial Crop
Hay	Perennial Crop

Hay	Perennial Crop

Double Cropping: In the case of multiple crops in a growing season, the following 2 year rotation with vegetables followed by a cover crop would be appropriate:

Crop Tabs	**Cover Type follow Crop**
Lettuce	Annual Crop
Carrots	Annual Crop
Lettuce	Cover Crop
Lettuce	Annual Crop
Carrots	Annual Crop
Lettuce	Cover Crop

Perennial Crops: Crops such as orchards or nut trees need to enter 1 year, or would enter more years if they have a year in the rotation which breaks the cycles (for example, replanting). Most would look like this:

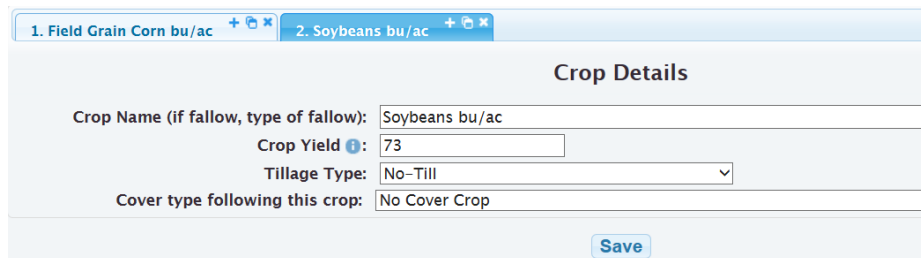| **Crop Tabs**	**Cover Type follow Crop**
Apple Trees	Perennial Crop

4. Add another rotation by clicking the **Add Tab** or **Copy** icon. The Copy icon will copy the Crop Details entered to another rotation.

1. Field Grain Corn bu/ac

5. Enter the crop details for Crop Interval 2. The next crop in this example rotation is **Soybeans bu/ac**. The crop yield is **73** and the tillage type is **No-Till**. The cover type is **No Cover Crop**. Click **Save** when finished.

> NOTE: Click **Save** regularly and the response time of the server will be faster.

The following Management Points are added for each crop rotation:
    Individual Residue – Water Erosion
    Individual Residue – Wind Erosion
    Individual Residue – Soil Carbon
    Individual Residue – Sediment in Surface Water
    Individual Residue – Total Phosphorus Loss
    Individual Residue – Surface Nitrogen Loss
    Individual Residue – Subsurface Nitrogen Loss
    Individual Residue – Nitrogen Loss to Air
    Individual Residue – Pesticide Management (Leaching)
    Individual Residue – Pesticide Management (Solution Runoff)
    Individual Residue – Pesticide Management (Adsorbed Runoff)
    Individual Residue – Pesticide Management (Drift)
    Winter Cover – Water Erosion
    Winter Cover – Wind Erosion
    Winter Cover – Soil Carbon
    Winter Cover – Sediment in Surface Water
    Winter Cover – Total Phosphorus Loss
    Winter Cover – Soluble Phosphorus Loss
    Winter Cover – Subsurface Nitrogen Loss
    Winter Cover – Nitrogen Loss to Air
    Winter Cover – Pesticide Management (Leaching)
    Winter Cover – Pesticide Management (Solution Runoff)
    Winter Cover – Pesticide Management (Adsorbed Runoff)
    Winter Cover – Pesticide Management (Drift)

29

Note on the Crop Rotation Builder and the Integrated Erosion Tool: The Resource Stewardship rotation builder is frequently sufficient for basic planning decisions. When there is a need for more detailed evaluation, the Integrated Erosion Tool (IET) should be utilized, which provides a more detailed rotation builder.

Conservation Practices and Management Techniques related to Crop Rotation

Conservation Practices and Management Techniques are vitally important to consider when describing the crop rotation. When completing RS, especially when considering alternatives as part of a conservation plan, it is important to note the changes brought about by implementing various practices on the crop rotation questions. Credit for meeting standards has been accounted for in the crop rotation questions and those additional effects by meeting the standard. For example, Crop Rotation Residue effects are considered in the RS crop rotation evaluation, but IPM credit for breaking up pest cycles would be identified by selecting the practice under Conservation Practices and Management Techniques.

Below are some examples of common Conservation Practices which may have an effect which are captured by both the Crop Rotation tab questions and Conservation Practices tab practice selection.

Conservation Practice or Management Technique	Effects to Consider in Crop Rotation Answers
Conservation Crop Rotation (328)	Changes or Adds Crops in the Rotation
Cover Crop (340)	Changes Cover Type following Crop
Residue and Tillage Management No-Till (329)	Changes Tillage Type
Residue and Tillage Management Reduced Tillage (345)	Changes Tillage Type

Note on credit for Conservation Practices: The system does not double count management points from rotation questions and conservation practices. The effects of implementing the Conservation Practice to standard are in addition to the points for answering the crop rotation questions. So make sure if you plan a practice, you consider and capture any changes!

Nitrogen Overview

The nitrogen section must be completed for Cropland and Pastureland evaluations. Nitrogen and inputs are required to evaluate nutrient management in Resource Stewardship and are required for each crop. Nitrogen management is then evaluated by crop, and the most limiting (worst) crop is used to represent the crop rotation.

Nitrogen management should be based on both crop production goals and the potential for nutrient losses. Site-specific soils, climate, and water management should be considered for both crop production goals and nutrient loss potential. Based on each site's limitations, crop production goals and the way nutrients are applied may need to be adjusted to meet the stewardship threshold.

Good nitrogen management is complex and dynamic. It should be based on an overall nutrient management plan, and nitrogen application details should be adjusted yearly based on dynamic tests (soil, tissue, Pre-Sidedress Nitrogen Test (PSNT), etc.) and expected conditions for each year.

The Resource Stewardship nitrogen management evaluation begins by evaluating nitrogen applications recommended in the nutrient management plan compared to the expected removal of nitrogen by the crop. For example, for crops like corn, the goal is to apply no more than 120% of the nitrogen that will be removed by the crop - the ratio of the pounds applied versus the pounds removed <= 1.2). Applying less than that amount will tend to limit yield and applying more than that amount will tend to increase nitrogen losses. The timing and placement of nitrogen is also considered for nitrogen loss potential. The use of dynamic testing tools to fine tune nitrogen applications each year, and other special nutrient management techniques are credited separately from a list of applicable nutrient management techniques.

Crop Nitrogen Walk-Through

1. Open the **Roadmap**. For Crop evaluations, click on the desired crop (already determined in the Crop Rotation tab) at the top of the roadmap to select it to enter nutrient management information. This example uses Field Grain Corn, Rotation Number 1.

2. Click on the **Nitrogen** tab or select Nitrogen in the **Roadmap**.

3. Answer the **Nitrogen** management questions and click **Save**.

The first few questions ask about the management related to nitrogen carryover from previous crop(s), which could include cover crops. The first two questions should be answered based on the nutrient credit as part of the nutrient recommendation (fertilizer recommendations or fert recs). Some State nutrient management requirements may mandate a certain amount of credits to utilize as part of the fertilizer recommendations. Example: A corn crop following soybeans may be required to take a carryover credit of 15 to 40 pounds of available nitrogen from the previous soybean crop.

Is Nitrogen either carried over or applied to this crop? Yes/No/Yes, but no detail
available

The "Yes, but no detail available" resulting management points are zero or negative.

Is Nitrogen carried over from previous crop or cover crop: Yes/No/Yes, but no detail
available

The "Yes, but no detail available" resulting management points are zero or negative.

Amount of Nitrogen carryover from previous application and crops: Amount lbs N/acre

Enter the amount of nitrogen carryover from all sources (residual nitrogen from a prior crop,
prior legume crop, cover crop, prior manure applications expected to
mineralize, etc.) for this field or PLU, based on Land Grant University (LGU)
guidance and nutrient management plan. Example: a corn crop following
soybeans provides a 15 to 40 pound credit of available nitrogen from the
previous soybean crop.

Is Nitrogen applied to this crop: Yes/No

Amount of Nitrogen from inorganic fertilizer: Amount lbs N/acre

Enter the amount of inorganic nitrogen fertilizer applied or planned to be applied to each
field or PLU for the specific crop, based on LGU guidance and nutrient
management plan. This amount includes any amount of fertilizer applied after
the harvest of the prior crop that is intended to supply nutrients to the planned
crop. Example: Any monoammonium phosphate (MAP)/diammonium
phosphate (DAP) and/or anhydrous ammonia applied in the fall needs to be
accounted for in the following crop recommendations.

Amount of Nitrogen from organic nutrient source: Amount lbs N/acre

Enter the amount of available organic nitrogen applied or planned to be applied to this field
or PLU from any and all organic sources for the specific crop, based on LGU
guidance and nutrient management plan. This amount includes any amount of
manure, litter, biosolids, and other organic material applied after the harvest of
the prior crop that is intended to supply nutrients to the planned crop.
Example: Manure, biosolids, or litter applied in the fall and spring needs to be
accounted for in the following crop recommendations.

First nitrogen application relative to crop planting date: Select answer from drop-down

33

Split Application: Yes/No

Is first application <=40 lbs N/acre: Yes/No

Total number of splits =>3: Yes/No

Splitting nitrogen applications means that nutrients are applied closer to the time that the crop needs the nutrients for growth and maturation. When the first application of nitrogen applied is less than or equal to 40 pounds/acre, the availability of nitrogen more closely follows the needs of the plant through the various growth stages. Splitting the nitrogen application to 3 or more splits spoon feeds the crop and is especially valuable in areas of high nutrient loss and for high value crops.

Multiple nitrogen applications via irrigation applications (fertigation) is another higher level of nutrient management that accounts for numerous splits with smaller amounts of nitrogen applied at any one time.

Nutrient Timing Table - Nitrogen

Nutrient Timing Table - Nitrogen			
Timing	**Nitrogen First Application**	**Nitrogen Split Application**	
		No	**Yes**
> 21 days before planting	0	0	0
> 7 but ≤ 21 days before planting	5	0	5
+ or – 7 days around planting	10	0	10
> 7 days after planting	15	0	10

Nitrogen application method: Select answer from drop-down (Surface Broadcast, no incorporation; Surface application with incorporation (within 48 hours); Surface Broadcast with incorporation (within 24 hours); Immediate incorporation, Banded, or Injected; Fertigation

User will identify the method of application from the drop-down choices. If multiple methods of application are used in one year on one crop, choose the lower scoring method.

Application Method Table - Nitrogen

Application Method Table – Nitrogen			
Method	**N Loss to Surface Water**	**N Leaching Loss to Ground Water**	**N Loss to Air**
Surface Broadcast, no incorporation	0	0	0
Surface application with incorporation (within 48 hours)	5	0	5
Surface Broadcast with incorporation (within 24 hours)	10	0	15
Immediate incorporation, Banded, or Injected	15	0	20
Fertigation	15	0	20

4. Repeat steps 1-3 for each crop of the crop rotation (if applicable).

Management Points – N Ratio [Crop]: RS will use the amount of nitrogen applied (N Rate) and the amount of nitrogen removed by a crop (per yield unit) to conduct a lookup of the Nitrogen Ratio Table to return the Management Points for the nitrogen ratio by crop.

Nitrogen Ratio

Nitrogen Ratio		
Crop	**N Ratio**	**N Rate Point**
Standard, Legumes, Grass, & Tree Crops	0	15
	≤ 1.2	20
	≤ 1.4	15
	≤ 1.6	10
	≤ 1.8	5
	> 1.8	0
Small Grain and Specialty/Truck Crops	0	15
	≤ 1.4	20
	≤ 1.6	15
	≤ 1.8	10
	≤ 2.0	5
	> 2.0	0
Cotton	0	15
	≤ 60 lbs/bale	15
	> 60 lbs/bale	0

The closer the nitrogen ratio of applied nitrogen versus removed nitrogen is to 1.2 or 1.4 (depending on crop category above), the better the nitrogen rate point score. This process does not look to achieve maximum potential crop yield, but minimizes environmental losses while maintaining realistic crop yield goals and judiciously utilizing nutrients.

For each crop of the crop rotation, a Nitrogen Supplied/Removed Ratio will be established and Management Points will be returned for the following:

    Nutrient Management – Nitrogen Loss to Air
    Nutrient Management – Subsurface Nitrogen Loss
    Nutrient Management – Surface Nitrogen Loss

The below example is on a Field Grain Corn crop with a yield of approximately 200 bu/ac.

Current Crop: Field Grain Corn   Rotation Number: 1

Nitrogen

Online Help: Go to Nitrogen Help

Note:	All fields are required unless otherwise noted.
Is Nitrogen either carried over or applied to this crop:	YES
Is Nitrogen carried over from previous crop or cover crop:	YES
Amount of Nitrogen Carryover from previous applications and crops:	30 lbs N/acre
Is Nitrogen applied to this crop:	YES
Amount of Nitrogen from inorganic fertilizer:	130 lbs N/acre
Amount of Nitrogen from organic nutrient source:	0 lbs N/acre
First nitrogen application relative to crop planting date:	+ or - 7 days around planting
Split Application:	YES
Is first application <= 40 lbs N/acre:	YES
Total number of splits >= 3:	YES
Nitrogen Application method:	Immediate incorporation, banded, or injected

Save

Nutrients

Name	Value
Nitrogen Supplied/Removed Ratio	1.2651
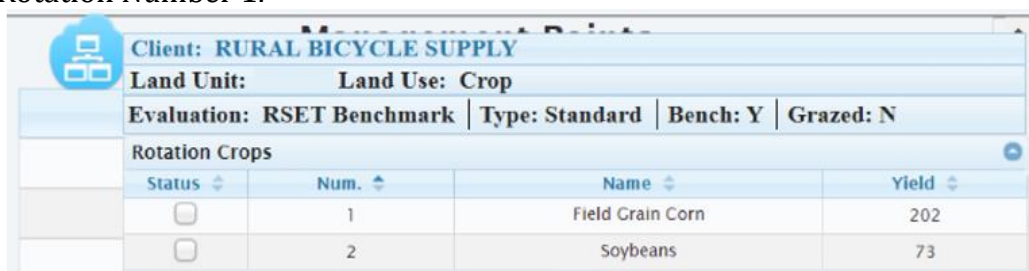
Phosphorus Overview

Like Nitrogen, the Phosphorus section in Resource Stewardship is only completed for Crop and Pasture evaluations. Both Nitrogen and Phosphorus comprise the nutrient management information and are captured at the crop rotation level for Crop evaluations.

Crop Phosphorus Walk-Through

1. Open the **Roadmap** [icon]. For Crop evaluations, click on the desired crop at the top of the roadmap to enter nutrient management information. This example uses Field Grain Corn, Rotation Number 1.
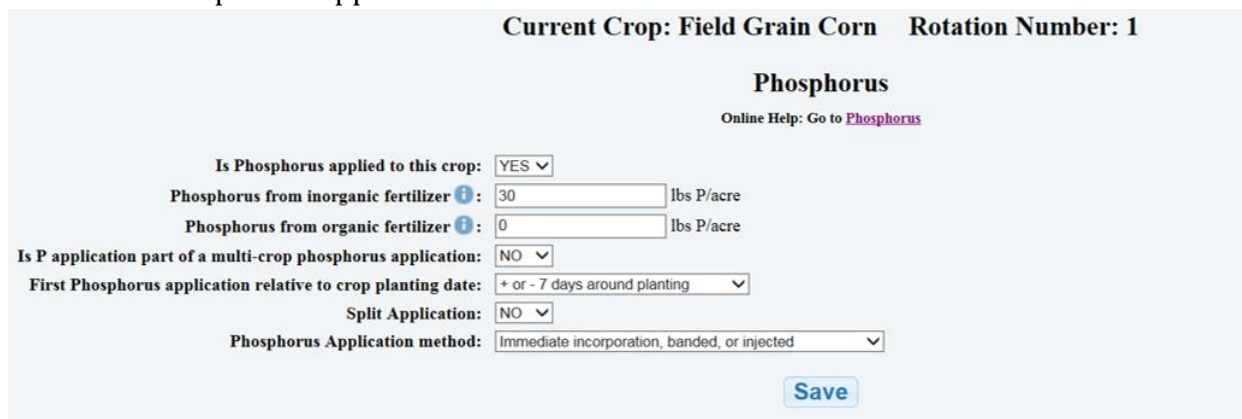
2. Click on the **Phosphorus** tab or select **Phosphorus** in the Roadmap [icon].

3. Answer the Phosphorus management questions and click **Save**.
   Note: The Phosphorus application from fertilizer must be converted from P205.

Is Phosphorus applied to this crop: Yes/No

Phosphorus from inorganic fertilizer: Amount in lbs P/acre

Phosphorus from organic fertilizer: Amount in lbs P/acre

Is P application part of a multi-crop phosphorus application: Yes/No

First Phosphorus application relative to crop planting date: Select answer from drop-down

Split Application: Yes/No

Phosphorus Application method: Select answer from drop-down

4. Repeat Steps 1-3 for each crop rotation (if applicable)

For each crop rotation, a Phosphorus Supplied/Removed Ratio will be established, and Management Points will be returned for the following:
    Nutrient Management – Total Phosphorus Loss
    Nutrient Management – Soluble Phosphorus Loss
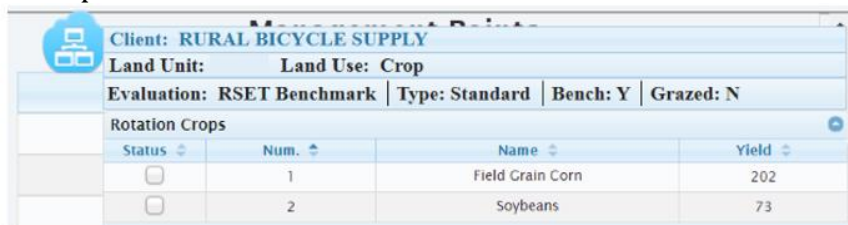
Crop IPM Overview

For Cropland evaluations, Integrated Pest Management (IPM) information is entered for each crop. In this section, you will enter information related to a site-specific combination of pest prevention, pest avoidance, pest monitoring and pest suppression strategies.

Crop IPM Walk-Through

1. Open the **Roadmap** . For Crop evaluations, select the desired crop at the top of the Roadmap to enter the IPM information.

2. Click the Integrated Pest Management **(IPM)** tab or select IPM in the **Roadmap** .

3. Answer the pesticide management information for each crop. (This example uses Field Grain Corn.) Answer **Yes** or **No** to the following questions as shown.

   If the answer to **Are Pesticides applied to the Crop?** is No, skip the remaining IPM questions.

Current Crop: Field Grain Corn   Rotation Num

Pesticide Management
Online Help: Go to **IPM**

Are Pesticides applied to this crop:	YES ✓
1. Do you have a plan that documents how pest populations will be monitored, and how new pests will be evaluated? ⓘ :	YES ✓
2. Do you routinely apply pesticides on a set schedule without monitoring pest pressure ⓘ :	NO ✓
3. Do you apply the same pesticides the same way each year based primarily on what has been effective in the past ⓘ :	NO ✓
4. Does your plan identify which suppression kinds and techniques will be considered for each pest? ⓘ :	YES ✓
5. Do you carefully target pest suppression to just the fields or portions of fields that need it based on scouting ⓘ :	YES ✓
6. Do you utilize pest suppression techniques that will have less impact on off-site natural resources, including nearby drinking water sources and terrestrial/aquatic wildlife habitats ⓘ :	YES ✓
7. Do you monitor and document environmental conditions at the field level to guide your scouting and pesticide application decisions ⓘ :	YES ✓
8. To reduce the need for pest suppression, do you utilize pest prevention or avoidance techniques? ⓘ :	YES ✓
9. Do you utilize any cultural, mechanical, or biological suppression techniques (including prescribed grazing) or semio-chemicals, to reduce the need for higher-hazard pesticides? ⓘ :	YES ✓
10. Do you utilize a carefully designed crop rotation/trap crop system that prevents and avoids pests so effectively that routine pest suppression is NOT necessary ⓘ :	NO ✓

Save

1. **Do you have a plan that documents how pest populations will be monitored, and how any new pests will be evaluated?:** Yes/No

   Note: The IPM Plan should be less than 3 years old and include monitoring plans and pest suppression decision criteria for all expected pests, including weeds, insects, and diseases.

2. **Do you routinely apply pesticides on a set schedule without monitoring pest pressure?:** Yes/No

   Note: This does not include a single pesticide application ahead of time to help manage a universal pest like treating seeds with a fungicide to help prevent soil-borne diseases.

3. **Do you apply the same pesticides the same way each year based primarily on**

what has been effective in the past?: Yes/No

Note: This includes using multiple GMO crops in sequence that utilize the same or similar pesticide chemistry year after year without rotating mode of action.

4. **Does your plan identify which suppression kinds and techniques will be considered for each pest?:** Yes/No

Note: This includes a list of all probable pest suppression techniques (synthetic pesticides, organic pesticides, biological/mechanical/cultural controls, etc.) that will be considered for each pest and how different suppression techniques will be rotated to manage pest resistance.

5. **Do you carefully target pest suppression to just the fields or portions of field that need it based on scouting:** Yes/No

Note: Based on scouting, economic injury thresholds, and other IPM principles that are specific to a particular cropping system and its pests. Prescribed pest suppression techniques are only utilized when and where they are absolutely necessary.

6. **Do you utilize pest suppression techniques that will have less impact on off-site natural resources, including nearby drinking water sources and terrestrial/aquatic wildlife habitats:** Yes/No

Note: This includes IPM systems that preferentially utilize things such as pesticides with lower WINPST soil/pesticide hazard ratings, pesticides with less impact on pollinator, and reduced tillage for weed control to limit the potential for sediment loss.

7. **Do you monitor and document environmental conditions at the field level to guide your scouting and pesticide application decisions?:** Yes/No

Note: This includes monitoring temperature, rainfall, relative humidity, and wind speed at the field level as well as monitoring the weather forecast so pesticide applications can be timed to minimize the potential for offsite losses via wind and water.

8. **To reduce the need for pest suppression, do you utilize pest prevention or**

avoidance techniques?: Yes/No

Note: Pest prevention techniques include using pest-free seeds and transplants, cleaning tillage and harvesting equipment between fields, and eliminating alternate hosts for insect pests or disease organisms. Pest avoidance techniques include using crop rotations that eliminate alternate hosts, using trap crops, and using pest-resistant varieties.

9. **Do you utilize any cultural, mechanical, or biological suppression techniques (including prescribed grazing) or semio-chemicals, to reduce the need for higher-hazard pesticides?:** Yes/No

Note: This includes IPM systems that preferentially substitute cultural, mechanical, or biological suppression techniques and semio-chemicals (pheromones, attractants, repellants, etc.) in place of synthetic or organic pesticides to reduce pesticide use. When pesticides are needed, those with lower WINPST soil/pesticide hazard ratings are preferred.

10. **Do you utilize a carefully designed crop rotation/trap crop system that prevents and avoids pests so effectively that routine pest suppression is NOT necessary?:** Yes/No

Note: This is a very high level IPM system that is difficult to achieve in large scale agricultural production. It relies on very careful management to prevent and avoid pests so effectively that routine pest suppression (including synthetic or organic pesticide use and soil disturbing tillage) are not necessary.

1. Click the **Save** button.

Management Points are returned for the following:

      IPM Pesticide Management (Adsorbed Runoff)

      IPM Pesticide Management (Drift)

      IPM Pesticide Management (Leaching)

      IPM Pesticide Management (Solution Runoff)

WINPST Online Overview
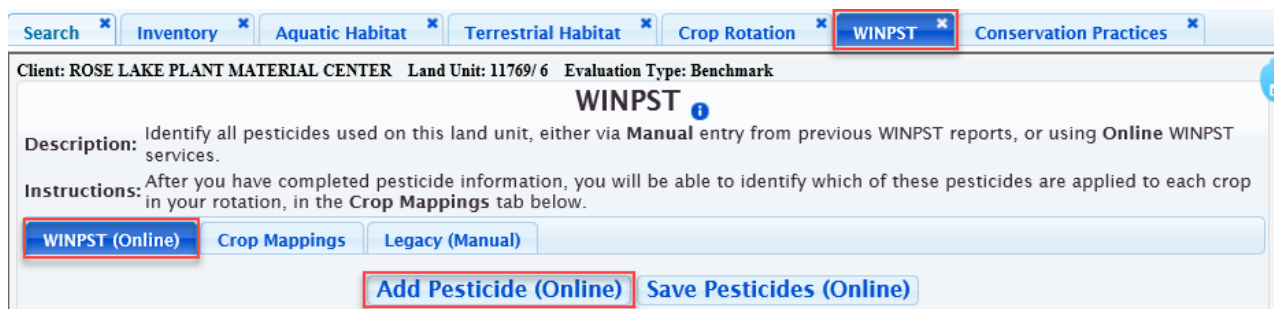
WINPST is an environmental risk screening tool for pesticides. It can be used to evaluate potential pesticides that move with water or eroded soil/organic matter and affect non-targeted organisms.

WINPST data that was captured in Resource Stewardship prior to September 2017 can be found in the Legacy (Manual) tab. The Legacy (Manual) tab also allows the manual entry of WINPST data captured outside of Resource Stewardship.

For Crop Evaluations, all probable pesticides should be selected in WINPST for each crop in the rotation. The same pesticide may be used differently on the same crop at different times, so a given pesticide may need to be selected in WINPST more than once with different application parameters, even when WINPST reports are developed for each crop.

WINPST Online Walk-Through

1. Select the **WINPST** tab or select WINPST on the **Roadmap** .

2. Select **WINPST (Online)**

3. Click **Add Pesticide (Online)** for each pesticide you want to search for and add.

4. Search for the pesticides in the EPA database and click on it to select it.

    Enter all or part of a pesticide product name. Users can also enter a company or product code (or both). A complete EPA registration number for the company and/or product code must be entered (entering 52 will not match products with the code 523-445).

The below example shows the search results of a partial match of a pesticide product name.

The below example shows the search results for the exact match of a pesticide product name (in general, fewer results will be returned when **Exact Match** is selected for the search).

The below example shows the results of a complete match (company 3-digit number and product 3-digit number) of an EPA registration number. Note that multiple products can be returned for the same registration number.

The below example shows the results for a company match by EPA registration number (in general, more results will be returned if a 3-digit product number is not also included in the search).

Resource Stewardship – Crop Evaluations

5. Select the **App Area**, **App Method**, and **App Rate** details for each pesticide.

6. Click **Get Hazard Ratings** and click **Save Pesticides (Online)** for each Pesticide tab added. (Repeat Steps 1 -6 for each additional pesticide.)

Note: The application rate can vary between active ingredients. While active ingredient hazard ratings are shown, only the pesticide product level ratings are used in Resource Stewardship.

7. For Crop Evaluations only, click the **Crop Mappings** tab.

8. Select which pesticides apply to each crop, click **I Have Finished Identifying The Pesticides Applied To This Crop** for both crops, and then select **Save Pesticides Applied to Each Crop.**

Management Points are returned for the following:

WINPST – Pesticide Management (Leaching)
WINPST – Pesticide Management (Solution Runoff)
WINPST – Pesticide Management (Adsorbed Runoff)

WINPST Manual Entry Overview

To enter WINPST data manually, look through all the ratings in the Soil/Pesticide Interaction Hazard Rating Report to identify the worst-case (highest risk) result in each category (Leaching – Human, Leaching - Fish, Solution Runoff – Human, Solution Runoff – Fish, and Adsorbed Runoff – Fish) for all planned pesticides for a crop on all planned land unit (PLU) soils. Circle each of those worst-case ratings on the WINPST report for documentation and then select those five worst case ratings in Resource Stewardship in the WINPST data entry screen. Note that the highest hazard ratings for each of the five categories may be different for different soils and/or different pesticides.

Note: Selecting pesticides in WINPST by product name can sometimes select multiple active ingredients. Each active ingredient has its own unique hazard rating, so a product should be represented by the worst case (highest risk) rating for each category for all the product's active ingredients.

Ratings reported in WINPST:
Very Low (V)
Low (L)
Intermediate (I)
High (H)
eXtra High (X)

Soil / Pesticide Interaction Loss Potential and Hazard Rating Report

```
                              LEGEND

    X  -- eXtra high
    H  -- High
    I   -- Intermediate
    L  -- Low
    V  -- Very low

    Conditions that affect ratings:
    (none)      -- Broadcast application (default); applied to more than 1/2 the field
       b        -- Banded application; applied to 1/2 the field or less
       p        -- Spot application; applied to 1/10th of the field or less

    (none)      -- Surface applied (default); applied to the soil surface
       i        -- Soil incorporated; with light tillage or irrigation
       f        -- Foliar application; directed spray at nearly full crop/weed canopy

    (none)      -- Standard application rate (default); greater than 1/4 lb/acre
       l        -- Low rate of application;        1/10  to  1/4 lb/acre
     <ul>       -- Ultra Low rate of application;      1/10 lb/acre or less

       m        -- There are surface connected macropores (cracks) that go at least 24 inches deep.
       w        -- The high water table comes within 24" of the surface during the growing season.
       s        -- The field slope is greater than 15%.

    <none>      -- Default condition for all climates that have rainfall/irrigation after pesticide   application
    <dry>       -- Exception for arid climates that have a low probability of rainfall and no irrigation afer pesticide application

    SPISP II I-Ratings:
      Leaching        -- Soil / Pesticide Interaction Leaching Potential
      Solution        -- Soil / Pesticide Interaction Solution Runoff Potential
      Adsorbed        -- Soil / Pesticide Interaction Adsorbed Runoff Potential
```

WINPST Manual Entry Walk-Through (Crop Example)

This example uses Roundup, Trizmet II, and Status. The below table shows their hazard ratings gathered from the Soil/Pesticide Interaction Hazard Rating Report.

Pesticide Name	Roundup	Trizmet II	Status
Leaching – Human	Low (L)	High (H)	Low (L)
Leaching – Fish	Low (L)	Intermediate (I)	Low (L)
Solution Runoff – Human	Low (L)	High (H)	Very Low (V)
Solution Runoff – Human	Low (L)	Intermediate (I)	Very Low (V)
Adsorbed Runoff – Fish	Low (L)	Low (L)	Very Low (V)

1. Click on the **WINPST** tab or select WINPST on the **Roadmap** 🖧 .

2. On the **Legacy (Manual)** tab, type the Pesticide Name (this example uses Roundup) and enter the pesticide hazard ratings gathered from the Soil/Pesticide Interaction Hazard Rating Report. Click **Save Pesticides (Manual)** when finished.

3. On the tab showing the first pesticide you entered, click the **Add** or **Copy** feature to add additional pesticides. The Copy feature allows users to copy over pesticide information and make any necessary edits to the pesticide name or hazard ratings.
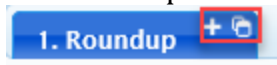
4. On Tab 2, enter the pesticide name and hazard ratings for **Trizmet II** and click **Save Pesticides (Manual)** when finished.

5. Click the **Add** or **Copy** button.

6. On Tab 3, enter the pesticide name and hazard ratings for **Status** and click **Save Pesticides (Manual)** when finished.

Resource Stewardship – Crop Evaluations

7. Click **Crop Mappings** and select which pesticides are applied to each crop in the rotation. A WINPST survey is loaded. Check all the applicable radio buttons for the pesticides applied. Click the radio buttons for **I Have Finished Identifying The Pesticides Applied To This Crop** for both crops. Click the **Save Pesticides Applied To Each Crop** button.

Management Points are returned for the following:

      WINPST – Pesticide Management (Leaching)
      WINPST – Pesticide Management (Solution Runoff)
      WINPST – Pesticide Management (Adsorbed Runoff)

Conservation Practices Overview

Information for the Conservation Practices and Management Techniques (CPMT) section is gathered from the client. CMPTs can be chosen from the open-ended list in Resource Stewardship based on what has been implemented on the Planned Land Unit (PLU). For Crop evaluations, these CPMTs are identified at the crop rotation level.

Conservation Practices Walk-Through

1. Click the **Conservation Practices** tab or select it in the **Roadmap** .

2. Answer Yes to **Does the PLU have any resident conservation practices which will impact its conservation stewardship** (if applicable).

3. Enter the conservation practice name or practice number. This example uses Conservation Crop Rotation (328) as the first conservation practice applied. 328 can also be entered for the conservation practice number.

4. To enter another practice click the **Add Row** button.

To add, delete or to reorder the rows use the appropriate button. The order of conservation practices has no effect on the results.

     Add Row

- 🗑 Delete Row
- ⬆ Move Row Up
- ⬇ Move Row Down

5. Repeat steps 3 and 4 for each conservation practice you wish to enter. This example uses Sprinkler System (442), Irrigation Water Management (449), Residue and Tillage Management No-Till (329).

6. After all practices have been entered, click the **I Have Finished Entering Conservation Practices** radio button and **Save**.

Row		Identify which of the PLUs Conservation Practice/Mitigation Techniques impa
1	➕🗑⬇	Conservation Crop Rotation (328)
2	➕🗑⬆⬇	Sprinkler System (442)
3	➕🗑⬆⬇	Irrigation Water Management (449)
4	➕🗑⬆	Residue and Tillage Management No-Till (329)

☑ **I Have Finished Entering Conservation Practices Data**

Save Practices

7. For Crop evaluations, select which conservation practices are applied to each crop in the rotation. Check all the radio buttons for the applicable practices. For the status, click the radio buttons for **I Have Finished Identifying The Practices Applied To This Crop** and click **Save Practices Applied To Each Crop**.

Save Practices | **Save Practices Applied To Each Crop**

Identify The Practices Applied To Each Crop In The Rotation

Crop	Practices				Status
	Conservation Crop Rotation (328)	Sprinkler System (442)	Irrigation Water Management (449)	Residue and Tillage Management, No-Till (329)	I Have Finished Identifying The Practices Applied To This Crop
2. Field Grain Corn	☑	☑	☑	☑	☑
4. Soybeans	☑	☑	☑	☑	☑

Management Points are returned for the following:
   CPMT – Water Erosion
   CPMT – Wind Erosion
   CPMT – Soil Carbon
   CPMT – Sediment in Surface Water

CPMT – Sediment in Surface Water
CPMT – Total Phosphorus Loss
CPMT – Soluble Phosphorus Loss
CPMT – Surface Nitrogen Loss
CPMT – Subsurface Nitrogen Loss
CPMT – Nitrogen Loss to Air
CPMT – Pesticide Management (Leaching)
CPMT – Pesticide Management (Solution Runoff)
CPMT – Pesticide Management (Adsorbed Runoff)
CPMT – Pesticide Management (Drift)

Irrigation Overview

The Irrigation Management tab calculates irrigation stewardship by allowing the user to answer a portion of the Farm Irrigation Rating Index (FIRI) questions on the data entry page and then uses a web service to get an immediate Irrigation System Efficiency rating. FIRI is an NRCS resource used by planners to evaluate irrigation systems and management. The Resource Stewardship platform uses a modified version of FIRI which focuses on management decisions. This modified version is intended to allow greater efficiency in the data entry and farm evaluation processes.

FIRI in Resource Stewardship performs a quick analysis to determine whether irrigation operations meet irrigation threshold criteria. It is also used to compare an existing system to a proposed system in order to estimate water conserved. The Resource Stewardship platform uses FIRI for crop and pasture land uses. It is not applicable for land uses that do not use irrigation.

Resource Stewardship also allows manual entry of direct results from FIRI at the user's discretion. Users may enter FIRI results in the Stand Alone Irrigation section of the tool.

Irrigation Walk-Through

1. On the **Inventory** tab, enter the maximum irrigation per year and click **Save**. Irrigation data entry is only supported when an inventory survey has a maximum irrigation per year >0.

2. Click on the **Irrigation Management** tab or select Irrigation Management in the **Roadmap** .

3. If Irrigation data is not available, select **No** and skip the remaining questions. If Irrigation data is available, select **Yes**, answer the following questions for the selected irrigation type. The below example shows the irrigation questions for the irrigation type Border-Contour Level field crop.

Irrigation Data Available: Yes/No. If Yes, answer the following question.

Irrigation Type: Select answer from drop-down. Irrigation type answer choice will influence the following questions to answer for this section. Not every question will be asked for each irrigation type

Land Leveling: Select answer from drop-down

Water Distribution Control: Select answer from drop-down

Conveyance: Select answer from drop-down

Tailwater Recovery: Select answer from drop-down

Water Measurement: Select answer from drop-down

Irrigation Skill and Action: Select answer from drop-down

Irrigation Scheduling/Soil Moisture: Select answer from drop-down

Water Delivery Factor: Select answer from drop-down

Maintenance Factor: Select answer from drop-down

Emitter Clogging: Select answer from drop-down

Trickle Design: Select answer from drop-down

Climatic: Select answer from drop-down

Wind: Select answer from drop-down

Sprinkler Design: Select answer from drop-down

See the [Irrigation Management](#) help page (https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/?cid=nrcseprd1334052) for an appendix listing all of the Irrigation Management answer choices.

4. Click **Save**

Management Points are returned for the following:
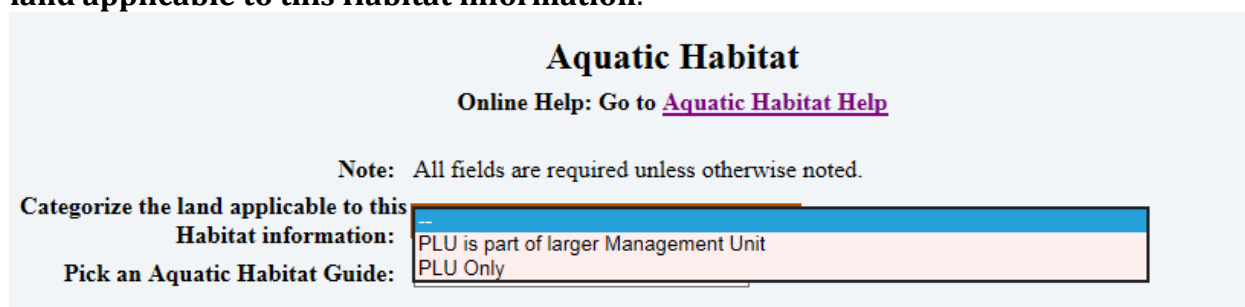
Irrigation Management

Aquatic Habitat Overview

This section evaluates aquatic habitat by completing the appropriate aquatic Wildlife Habitat Evaluation Guide (WHEGs). WHEGs are models that depict important relationships between fish and wildlife and their habitats and provide an index of habitat suitability. They 1) simplify the real world, 2) improve understanding, and 3) predict outcomes.

Different WHEGs are available for selection in Resource Stewardship depending on the type of aquatic habitat you are evaluating.

Aquatic Habitat Walk-Through

1. Click on the **Aquatic Habitat** tab or select Aquatic Habitat on the **Roadmap** 🖥️.

2. Select the appropriate answer (PLU is part of larger Management Unit or PLU Only) for **Categorize the land applicable to this Habitat information**.

Aquatic Habitat

Online Help: Go to Aquatic Habitat Help

Note: All fields are required unless otherwise noted.

Categorize the land applicable to this Habitat information:
- PLU is part of larger Management Unit
- PLU Only

Pick an Aquatic Habitat Guide:

3. Select an aquatic habitat guide from the selection. If no guide is applicable, then select **Not Applicable.** Note that selecting Not Applicable means there is no such habitat on the PLU (i.e. no water on cropland). This will result in no score for aquatic habitat. Selecting **Not Evaluated** means that habitat concerns may exist, but questions were either unanswered or responses unknown. This will result in a failing score for aquatic habit.

Aquatic Habitat

Online Help: Go to **Aquatic Habitat Help**

Note: All fields are required unless otherwise noted.

Categorize the land applicable to this Habitat information: PLU Only

Pick an Aquatic Habitat Guide:

--
Not Evaluated
Not Applicable
Approved Alternative Guide
Bog Turtle Guide
National Lakes and Ponds Guide
National River Guide
National Stream Guide
National Wetland Guide
Rio Grande Cutthroat Trout

Required

Currently, you can select the following for **Pick an Aquatic Habitat Guide**:

Not Evaluated
Not Applicable
Approved Alternative Guide
Bog Turtle Guide
National Lakes and Ponds Guide
National River Guide
National Stream Guide
National Wetland Guide
Not Applicable
Rio Grande Cutthroat Trout

4. Select the appropriate answer choices from the drop down for each question for the habitat guide selected and click the **Save** button.

Note that if an **Approved Alternative Guide** is selected, utilize the guide outside Resource Stewardship and manually enter the information for **Name of Habitat Guide, Guide Threshold, and Guide Results**.

The Guide Threshold is 0.5 in most cases. The Guide Result (the client's score calculated based on the WHEG instructions) is typically a result between 0-1.

Management Points are returned for the following:
    Aquatic Habitats

Terrestrial Habitat Overview

This section of the tool evaluates terrestrial habitat using the appropriate Wildlife Habitat Evaluation Guides (WHEGs). WHEGs are models that depict important relationships between fish and wildlife and their habitats and provide an index of habitat suitability. They 1) simplify the real world, 2) improve understanding, and 3) predict outcomes.

Different guides are available for selection depending on land use being evaluated. In addition, a limited number of Working Lands for Wildlife (WLFW) guides are also available.

Terrestrial Habitat Walk-Through

1. Click on the **Terrestrial Habitat** tab or select Terrestrial Habitat on the **Roadmap** .

2. Select the appropriate answer (PLU is part of larger Management Unit or PLU Only) for **Categorize the land applicable to this Habitat information**.

Terrestrial Habitat

Online Help: Go to Terrestrial Habitat Help

Note: All fields are required unless otherwise noted.

Categorize the land applicable to this Habitat information:
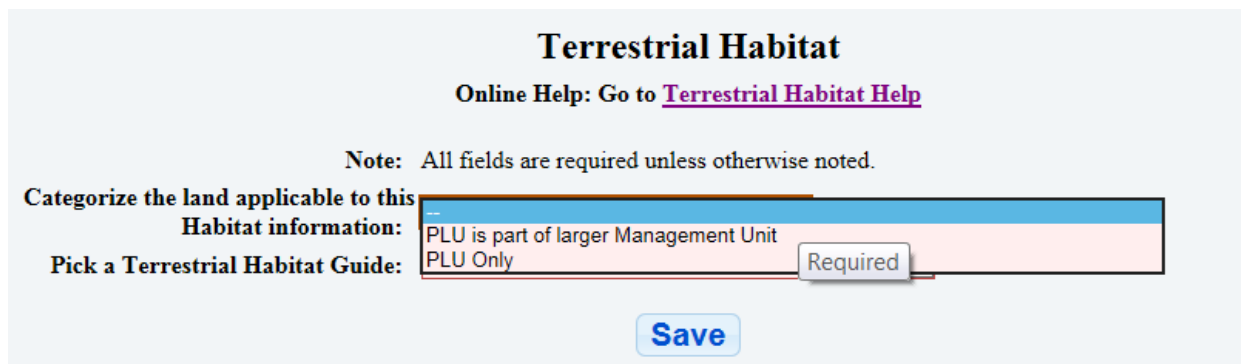—
PLU is part of larger Management Unit
PLU Only   Required

Pick a Terrestrial Habitat Guide:

Save

3. Select a terrestrial habitat guide from the choices available. If no guide is applicable, then select **Not Applicable.** Note that selecting Not Applicable means there is no such habitat on the PLU (i.e. no wildlife on farmstead). This will result in no score for terrestrial habitat. Farmstead and Associated Ag Evaluations have the option to select **Evaluated as part of adjacent land use**. This option will not penalize or improve the score. Selecting **Not Evaluated** means that habitat concerns may exist, but questions were either unanswered or responses unknown. This will result in a failing score for terrestrial habit.

   Available for all Evaluations:
   Not Applicable
   Not Evaluated
   Approved Alternative Guide

62

Goldenwinged Warbler AppalachianMtn Guide
Greater Sage Grouse (ND and SD)
Greater Sage Grouse (WA)
Greater Sage Grouse (Idaho)
Lesser Prairie Chicken – Sand Sagebrush
Lesser Prairie Chicken – Sand Shinnery Oak
Monarch Butterfly Midwest Guide
Monarch Butterfly Southern Great Plains Guide
New England Cottontail
Southwestern Willow Flycatcher < 6000ft elev Guide
Southwestern Willow Flycatcher > 6000ft elev Guide

Available for Crop Evaluations:
National Cropland (Flooded) Guide
National Cropland (Unflooded) Guide
National Cropland with Hay (Unflooded) Guide
National Hayland Guide

Available for Range Evaluations:
National Range Guide

Available for Pasture Evaluations:
National Pasture Guide

Available for Forest Evaluations
Forest Guide

Available for Farmstead and Associated Ag Evaluations

Evaluated as part of Adjacent Land Use

4. Select the appropriate answer choices from the drop down for each question for the terrestrial habitat guide selected and click the **Save** button.

Example

Note that if an **Approved Alternative Guide** is selected, utilize the guide outside Resource Stewardship and manually enter the information for **Name of Habitat Guide**, **Guide Threshold**, and **Guide Results.**

The Guide Threshold is 0.5 in most cases. The Guide Result (the client's score calculated based on the WHEG instructions) is typically a result between 0-1.

Management Points are returned for the following:

Terrestrial Habitats

Additional WHEG Information

Common terms included in WHEGs are described below.

Non-Cropland Habitat Elements (NCHE): This includes habitat elements associated with crop fields occurring within the field, such as field borders, odd areas, windbreaks, wetlands, brushy draws, include field borders, odd areas, windbreaks, wetlands, brushy draws, hedgerows, seeps, riparian areas, vegetated ditches, native vegetated communities, rare and declining habitats, and center pivot corners hedgerows, seeps, riparian areas, vegetated ditches, native vegetated communities, rare and declining habitats, and center pivot corners. It also includes habitat elements immediately adjacent to the crop fields, such as CRP (Conservation Reserve Program), woodlands, and riparian areas. The evaluated NCHE must be under the control of the applicant and be ≥ 30 feet wide and ≥ 0.1 acre. NCHE must meet state quality standards for wildlife habitat as defined by the NRCS State Biologist with guidance from the State Wildlife Agency.

Pasture and Non-Pasture Habitat Elements (NPHE): This includes non-pastureland cover, such as field borders, odd areas, windbreaks, wetlands, brushy draws, hedgerows, seeps, riparian areas, and center pivot corners that occur within the field, or NPHE that occurs immediately adjacent to the pasture, such as CRP, woodlands, and riparian areas. The evaluated NPHE must be under the control of the applicant and be ≥ 30 feet wide and ≥ 0.1 acre. NPHE includes paddocks not grazed during the nesting season. NPHE must meet state quality standards for wildlife habitat as defined by the NRCS State Biologist with guidance from the State Wildlife Agency.

Range: This refers to rangeland habitats on which the climax or potential plant cover is composed principally of native grasses, grass-like plants, forbs, or shrubs suitable for grazing and browsing, and introduced forage species that are managed like rangeland.

Resource Stewardship – Crop Evaluations

Crop Evaluation Results Overview

Evaluation results identify the benchmark condition at the site. Resource Stewardship can also evaluate alternative management scenarios or planned conservation activities to improve resource stewardship. Within RS, most major resource concerns are made up of sub-concerns. The user has the option to evaluate each sub-concern individually and determine the management level compared to the stewardship threshold.

In this section

- Crop Rotation Evaluation Results
- Crop Weighted Evaluation Results
- Evaluation Point Details
- Export Evaluation
- Resource Concern Report
- CPA-52
- Comparing Two Evaluations
  - o Copy an Evaluation to the Current PLU
  - o Comparing Two Evaluations on the Same PLU
- Interpreting the Evaluation Results

Crop Evaluation Results Walk-Through

Crop Rotation Evaluations

1. To view individual crop rotation evaluations, first click on the **Roadmap** 🖧 .

   After all information has been entered, the crop is indicated as complete by a bar graph icon 📊 located next to it at the top of the Roadmap.

2. Select the bar graph icon 📊 next to each crop rotation listed to view the individual rotation evaluation. Below is an example of crop rotation evaluation results for Field Grain Corn.
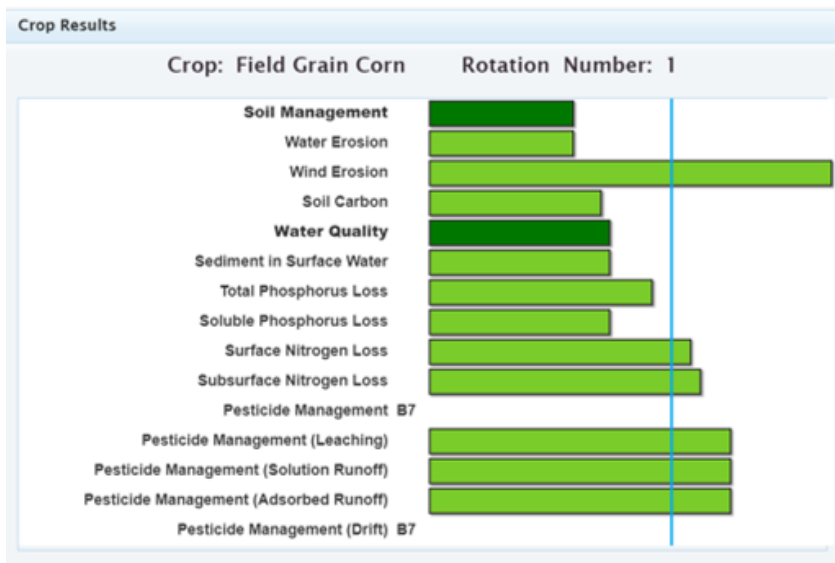
View the Weighted Evaluation

1. To view the weighted average of all input, click the **Roadmap** 🖧 and click on **Evaluation Result.**

    Note: If the **Evaluation Result** is not active, go through all the tabs to ensure that all information is entered and saved. All crop rotations must be marked complete to view the weighted evaluation result.
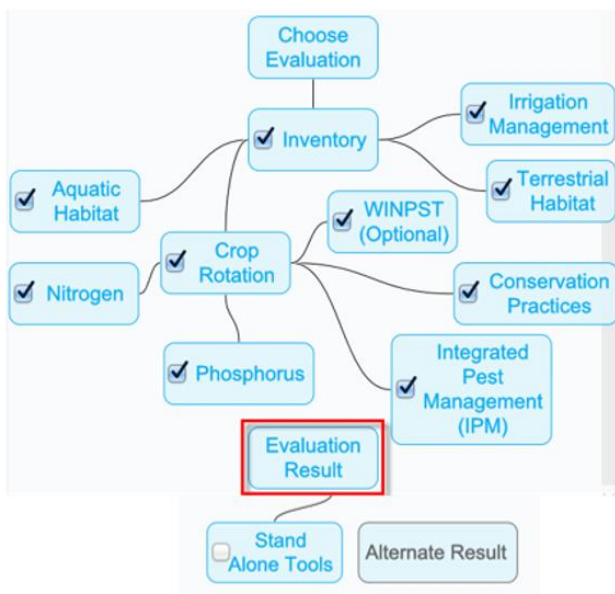
Below is an example Evaluation Report.
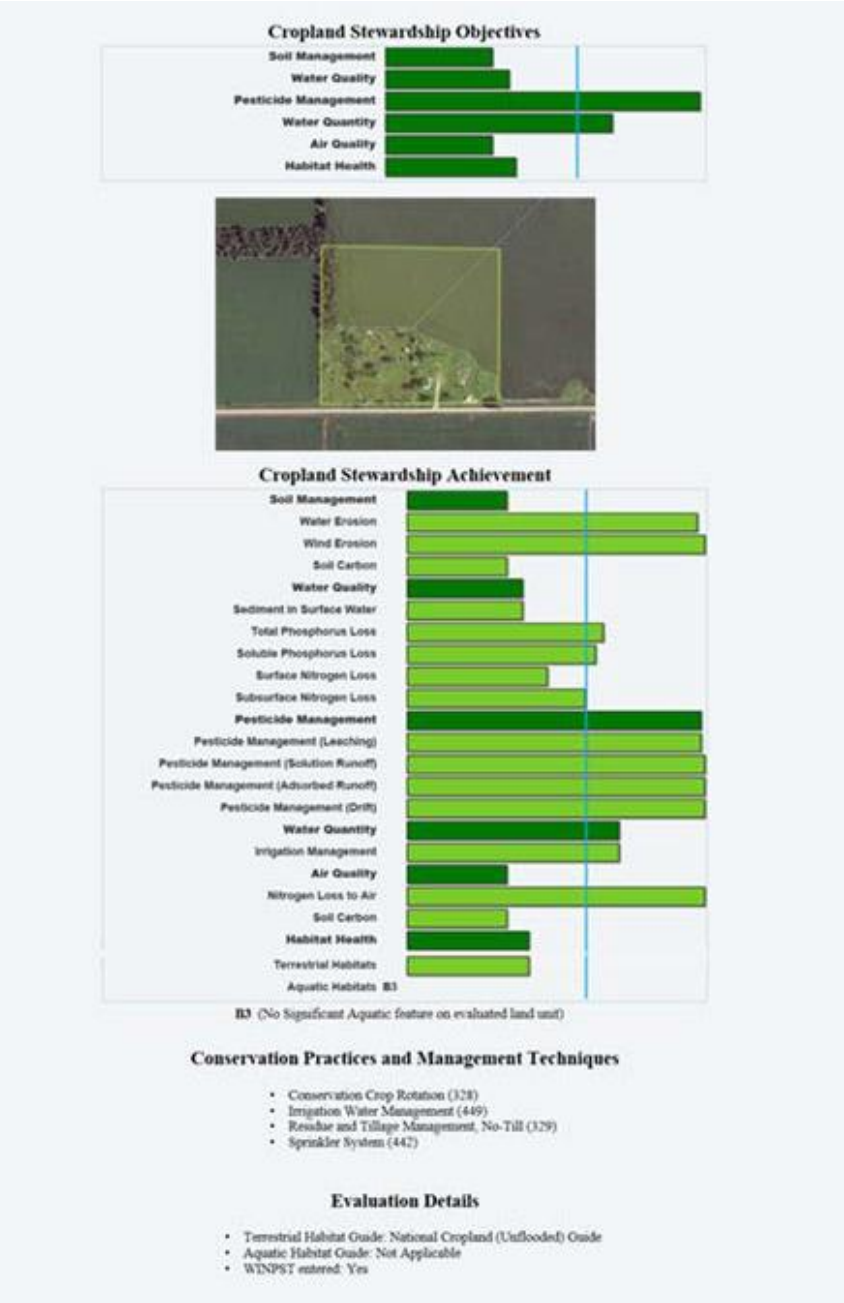
The Evaluation Report can be printed by clicking the **Print** button at the bottom of the Evaluation Details page.

Resource Stewardship – Crop Evaluations

Evaluation Point Details

1. To view the evaluation point details, click **Evaluation Details** at the bottom of the Evaluation Result report. This page provides the numerical scores and thresholds for the Management Points in the evaluation.

Export Evaluations

JSON files for Crop Evaluations can be exported and saved locally or to DMS.

1. Click **Export Evaluation**.

2. Choose **Export to DMS** or **Export to Disk**.

    Note: The file name can be edited but defaults to the following format: [Land unit] [Client Name] [Evaluation Name].

Resource Concern Report

Resource Stewardship Official Evaluation Results (Standard or Alternate) provide a report that maps the RS result areas to the NRCS Resource Concerns. (Note: RS does not currently provide mappings to all possible Resource Concerns.)

1. Click **Resource Concern Report** at the bottom of the Evaluation Results page.

| Print	Evaluation Point Details	Export Evaluation	ⓘ
	Resource Concern Report	CPA 52	

The Resource Concerns represented vary by land use evaluation type. Resource Concerns are mapped by point detail to the RS final Evaluation Results.

Cropland Resource Concern Achievement
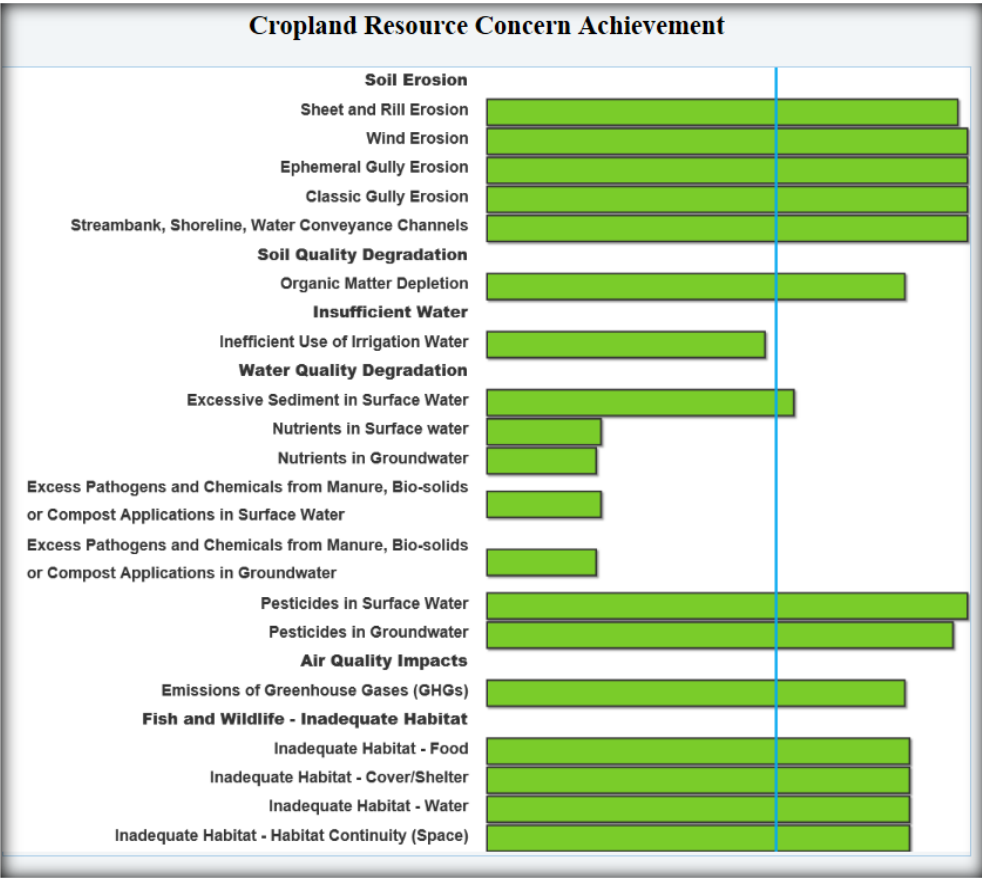
Unlike the final Evaluation Report, there are no summary bars rolling up the Resource Concern sets.

70

The bottom of the Resource Concern Report has a button to view the Resource Concern Point Details.

2. Click **Resource Concern Point Details**.
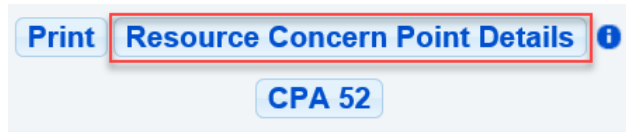
Multiple RS result areas may compete for the representation of a single Resource Concern and multiple Resource Concerns may be mapped from multiple Resource Stewardship result areas (example below).

Resource Concern Point Details

Resource Concern	Crop Resource Concern Score	Resource Stewardship Key Indicator	Crop Key Indicator Points
Sheet and Rill Erosion	98	Water Erosion	98
Wind Erosion	100	Wind Erosion	100
Organic Matter Depletion	87	Soil Carbon	87
Excessive Sediment in Surface Water	64	Sediment in Surface Water	64
Nutrients in Surface water	24	Surface Nitrogen Loss	24
Nutrients in Surface water	24	Total Phosphorus Loss	52
Nutrients in Groundwater	23	Subsurface Nitrogen Loss	23
Nutrients in Groundwater	23	Soluble Phosphorus Loss	100
Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Surface Water	24	Surface Nitrogen Loss	24
Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Surface Water	24	Total Phosphorus Loss	52
Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Groundwater	23	Subsurface Nitrogen Loss	23
Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Groundwater	23	Soluble Phosphorus Loss	100
Pesticides in Surface Water	100	Pesticide Management (Solution Runoff)	100
Pesticides in Surface Water	100	Pesticide Management (Adsorbed Runoff)	100
Pesticides in Groundwater	97	Pesticide Management (Leaching)	97
Inefficient Use of Irrigation Water	58	Irrigation Management	58
Emissions of Greenhouse Gases (GHGs)	87	Soil Carbon AQ	87
Inadequate Habitat - Food	88	Terrestrial Habitats	88
Inadequate Habitat - Food	88	Aquatic Habitats	78
Inadequate Habitat - Cover/Shelter	88	Terrestrial Habitats	88
Inadequate Habitat - Cover/Shelter	88	Aquatic Habitats	78
Inadequate Habitat - Water	88	Terrestrial Habitats	88
Inadequate Habitat - Water	88	Aquatic Habitats	78
Inadequate Habitat - Habitat Continuity (Space)	88	Terrestrial Habitats	88
Inadequate Habitat - Habitat Continuity (Space)	88	Aquatic Habitats	78

CPA-52

The CPA-52 is the environmental evaluation document utilized by NRCS to ensure compliance with the National Environmental Policy Act (NEPA). The user is responsible for choosing the RS land unit evaluations which properly associate to applications/agreements, and the subsequent upload of the CPA-52 into DMS. Not all Resource Concerns are mapped and included in the RS-generated CPA-52. Therefore, the user is expected to complete the document started by RS.

1. Click **CPA 52** at the bottom of the Evaluation Results page.

Resource Stewardship will generate a starter CPA-52 based on a template spreadsheet. Answers for each resource concern are based on whether the result area in RS achieved the threshold.

Benchmark Evaluation

Example of a result area from a Benchmark Evaluation that did not achieve the threshold, and the corresponding answer to be populated on the CPA-52.

Benchmark Evaluation Compared to a Planned/Alternative Scenario Evaluation

Example of a result area in RS from a Benchmark Evaluation that did not achieve the threshold, compared to a Planned/Alternative Scenario Evaluation where chosen actions improved the result area to exceed the threshold.

72

Resource Stewardship – Crop Evaluations

F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	I. Effects of Alternatives					
	No Action		Alternative 1		Alternative 2	
	Amount, Status, Description (Document both short and long term impacts)	√ if does NOT meet PC	Amount, Status, Description (Document both short and long term impacts)	√ if does NOT meet PC	Amount, Status, Description (Document both short and long term impacts)	√ if does NOT meet PC
SOIL: EROSION						
Wind Erosion No land unit(s) are at planning criteria for this resource concerns as evaluated by RSET, see RSE report for details		☐ NOT meet PC	Chosen Action(s), compared to the benchmark, improve this resource concern to the planning criteria as evaluated by RSET, see RSE report for details	☐ NOT meet PC		☐ NOT meet PC

Planned Evaluation/Alternative Scenario Compared to Planned Evaluation

Example of a comparison between two Planned/Alternative Scenario Evaluations where one evaluation achieved the threshold and the other did not, and the corresponding answers to be populated on the CPA-52.

F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	I. Effects of Alternatives					
	No Action		Alternative 1		Alternative 2	
	Amount, Status, Description (Document both short and long term impacts)	√ if does NOT meet PC	Amount, Status, Description (Document both short and long term impacts)	√ if does NOT meet PC	Amount, Status, Description (Document both short and long term impacts)	√ if does NOT meet PC
SOIL: EROSION						
Wind Erosion		☐ NOT meet PC	All Evaluated land units are at/or above the planning criteria for this resource concern as evaluated by RSET, See RSE report for details	☐ NOT meet PC	No land unit(s) are at planning criteria for this resource concerns as evaluated by RSET, see RSE report for details	☐ NOT meet PC

Comparing Two Evaluations

Comparing evaluations on the same PLU is useful to see how changes to the management system can improve or hinder stewardship. By comparing evaluations and identifying areas for improvement, land managers can better improve their resource stewardship and conservation. The evaluation results section allows the user to directly compare two different evaluations on the same report.

To compare evaluations on the same PLU, you must have two complete evaluations on the same land unit. To

73

do this you can copy an evaluation, and then edit the copied version to create an alternative scenario. (See here for assistance [creating a new evaluation](#) and here for assistance [copying an evaluation](#).) Any number of alternative evaluations or alternative scenarios may be attached to a PLU. Comparisons may be made against the benchmark evaluation or other alternative evaluations.

Comparing Two Evaluations on the Same Evaluation PLU

1. Click **Evaluation Result** in the Roadmap or select the **Evaluation Result** tab.

2. Evaluations available to compare to the current evaluation will be displayed in the Evaluations bar at the top of the Evaluation Results page. Select the evaluation you would like to compare by clicking on it.

The current evaluation will be compared to the selected alternative scenario evaluation. The alternative scenario evaluation will show up on the bar chart as shaded.

Resource Stewardship – Crop Evaluations
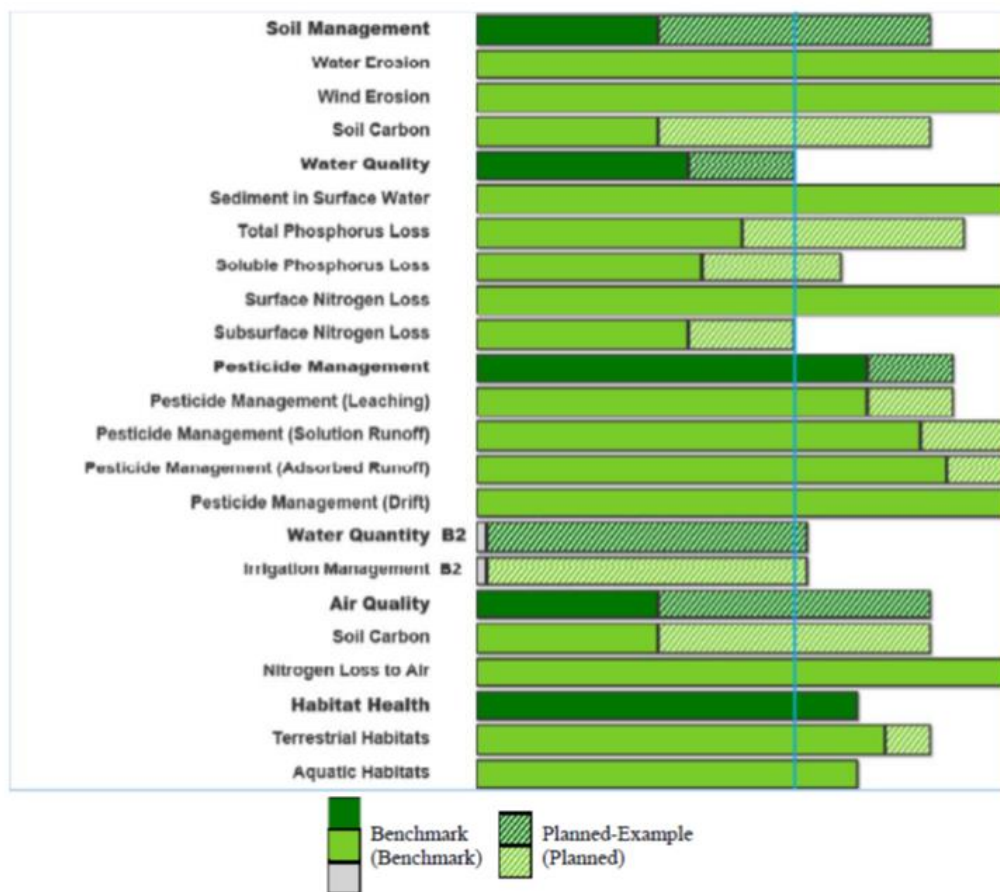
Interpreting the Evaluation Results

As shown in the graphic above, the solid bars represent the current/benchmark state. Each of the key indicators are rolled up into five main categories (Soil Management, Water Quality, Pesticide Management, Water Quantity, Air Quality, and Habitat Health), represented by the darker solid bars. When the current/benchmark state is compared to an alternative/planned scenario, the alternative/planned scenario is represented by the shaded bars. The vertical blue line represents the threshold value for each of the different key indicators. To pass stewardship, each result area must meet or be to the right of the blue bar.

Resource Stewardship – Crop Evaluations

Appendix A: Acronyms

CDSI	Conservation Delivery Streamlining Initiative
CEAP	Conservation Effects and Assessment Program
CLU	Common Land Unit
CPMT	Conservation Practices and Management Technique
CST	Customer Service Toolkit
ESD	Ecological Site Description
FIRI	Farm Irrigation Rating Index
FOTG	Field Office Technical Guide
FSA	Farm Service Agency
HUC	Hydrologic Unit Code
IET	Integrated Erosion Tool
LGU	Land Grant University
NM	Nutrient Management
NRCS	Natural Resources Conservation Service
RS	Resource Stewardship
RSE	Resource Stewardship Evaluation
RSET	Resource Stewardship Evaluation Tool
PLU	Planned Land Unit
PSMT	Pre-sidedress Nitrogen Test
RUSLE2	Revised Universal Soil Loss Equation
SSURGO	Soil Survey Geographic database
STEP	Stewardship Tool for Environmental Performance
T	Soil Loss Tolerance Level
T&E	Threatened and Endangered (species)
WEPS	Wind Erosion Prediction System
WHEG	Wildlife Habitat Evaluation Guide
WINPST	Windows Pesticide Screening Tool
WLFW	Working Lands for Wildlife
WQM	Water Quality Management Services

Appendix B: Resource Stewardship Inventory Flow

The Resource Stewardship Inventory Flow provides an overview of what information is captured in the inventory from beginning to end. The field boundary, inventory, rotation builder, integrated pest management (IPM), nutrient management, terrestrial habitat, and irrigation information is most critical to capture. You can select "No" or "Not Applicable" for conservation practices and aquatic habitat. However, completing those sections (if applicable) offers a more robust and thorough evaluation.

Section	Details
Field Boundary	- Soils info - Climate info
Inventory • Irrigation • Drainage • Gully Erosion	- Finalize threshold analysis - Gully evaluation complete
Rotation Builder • Years • P Soil Test • Crops • Yield • Tillage • Winter Cover	- Builds management points toward all soil, water, and air Indicators
Conservation Practices & Management Techniques	- Builds management points toward all indicators - Soil. sediment evaluation complete
Nutrient Management • 4Rs (Right Source, Right Rate, Right Time, Right Place)	- Builds management points toward all indicators
IPM • IPM Questions	- Builds management points toward pesticide indicators - Pesticide evaluation potentially complete
WINPST • Pesticides and Methods	- Builds management points toward pesticide indicators - Pesticide evaluation complete
Irrigation • Irrigation Management Questions	- Irrigation evaluation complete
Habitat • Terrestrial Questions • Aquatic Questions	- Habitat evaluation complete

Resource Stewardship – Crop Evaluations

Appendix C: Usage Detail Report and Hydrologic Unit Codes

Usage reports are available in RS. Access to reporting is controlled by NRCS zRoles (an RS reporting role in zRoles is required). Users with access can constrain reports by date, land use, operation type, subsets of their jurisdiction, and hydrologic unit codes (HUCs).

A hydrological code or hydrologic unit code is a sequence of numbers or letters that identify a hydrological feature like a river, river reach, lake, or area like a drainage basin (also called watershed or catchment). HUCs are available as a geospatial layer in NRT.

Boundary map of an HUC feature

Any of the 6 HUC levels may be specified in RS (region, subregion, basin, subbasin, watershed, and subwatershed). The table below shows examples of these 6 different levels and their HUCs.

Name	Level	Digits	Average size (square miles)	Number of HUs (approximate)	Example name	Example code (HUC)
Region	1	2	177,560	21	Pacific Northwest	17
Subregion	2	4	16,800	222	Lower Snake	1706
Basin	3	6	10,596	370	Lower Snake	170601
Subbasin	4	8	700	2,200	Imnaha River	17060102
Watershed	5	10	227 (40,000–250,000 acres)	22,000	Upper Imnaha River	1706010201
Subwatershed	6	12	40 (10,000–40,000 acres)	160,000	South Fork Imnaha River	170601020101

HUC data is visible to RS users in the following locations: the PLU inventory page, evaluation report headers, and the HUC column on the usage detail report.

PLU Inventory

Resource Stewardship – Crop Evaluations

PLU Inventory

Online Help: Go to **Crop Inventory Help**

Note: All fields are required unless otherwise noted.

Level: | National Resource Stewardship ▼

r ⓘ : | 15 | in.

d ⓘ : | YES ▼

Guide tion: | YES ▼

nels): | c. Banks are moderately stable, protected by roots of natural vegetation, wood, or rock or a combination of materials. Limited number

Save

Hydrologic Unit Codes

HUC	Region	Sub Region	Basin	Sub Basin	Watershed	Sub Watershed
050500021002	Ohio Region	Kanawha	Kanawha	Middle New	Bluestone Lake-New River	Lick Creek-Bluestone Lake

Evaluation Report Headers

Evaluation: CW Bench Crop **Evaluation Date:** 06/11/2018
Benchmark: YES **Grazed:** YES **Result Type:** Standard
Land Unit: **Land Use:** Crop **HUC:** 050500021002
State: **County:**
Client:
Planner:
Planner Contact: USDA HEADQUARTERS FACILITY (105198)
1400 INDEPENDENCE AVE SW, WASHINGTON, DC 20250-0002
(202) 720-4297

HUC Column on the Usage Detail report

Users can search for HUCs or enter them directly into the Usage Detail Report.

Resource Stewardship – Crop Evaluations

HUC Search

Hydrologic Unit Code (HUC)

If you already know the HUC code, you may enter it directly.
Alternatively, use the menus below to drill down to the desired HUC level.
Select the Done button when you have identified a 2, 4, 6, 8, 10 or 12 digit HUC.

HUC Code: [   ]   **Search By Code**

HUC Region: [   ]

01 New England Region
02 Mid Atlantic Region
03 South Atlantic-Gulf Region
04 Great Lakes Region
05 Ohio Region
06 Tennessee Region
07 Upper Mississippi Region
08 Lower Mississippi Region
09 Souris-Red-Rainy Region

Done   **Cancel**

HUC Search

Hydrologic Unit Code (HUC)

If you already know the HUC code, you may enter it directly.
Alternatively, use the menus below to drill down to the desired HUC level.
Select the Done button when you have identified a 2, 4, 6, 8, 10 or 12 digit HUC.

HUC Code: 050500   **Search By Code**
HUC Region: 05 Ohio Region
HUC Sub Region: 05 Kanawha
HUC Basin: 00 Kanawha
HUC Sub Basin: [   ]

01 Upper New
02 Middle New
03 Greenbrier
04 Lower New
05 Gauley
06 Upper Kanawha

Done   **Cancel**

Resource Stewardship – Crop Evaluations

USDA is an equal opportunity
provider, employer, and lender.